

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A probe for detecting an agonist or an antagonist to a nuclear receptor, in which, at least, ~~a ligand-recognition site containing~~ a ligand-binding domain of the nuclear receptor is connected with a binding-responsive site containing a peptide chain that specifically binds to a coactivator-binding site in the ligand-binding domain by a flexible linker to construct a fusion structure [ligand-recognition site/linker/binding-responsive site], and two reporters are connected with the respective ends of the fusion structure.

2. (Currently Amended) The probe of claim 1, wherein the ~~ligand-recognition site contains~~ a ligand-binding domain of a nuclear receptor is selected from the group including consisting of glucocorticoid receptor, estrogen receptor, progesterone receptor, peroxisome proliferator-activated receptor, androgen receptor, thyroid gland hormone receptor, retinoic acid receptor, vitamin D receptor and orphan receptors.

3. (Currently Amended) The probe of claim 1, wherein the ~~ligand-recognition site~~ ligand-binding domain is an estrogen receptor α ligand-binding domain, a peroxisome growth factor activation receptor ligand-binding domain or an androgen receptor ligand-binding domain.

4. (Original) The probe of claim 3, wherein the binding-responsive site is a nuclear receptor interaction domain peptide of steroid receptor coactivator 1.

5. (Original) The probe of claim 3, wherein the binding-responsive site contains the motif of SEQ ID No: 1.

6. (Previously Presented) The probe of claim 1, wherein the two reporters are a yellow fluorescent protein and a cyan fluorescent protein.

7. (Previously Presented) A method for screening an agonist to nuclear receptor, which comprises making a probe of claim 1 coexist with an agonist candidate substance, and measuring changes in signals with and without the agonist candidate substance.

8. (Original) The method for screening an agonist according to claim 7, wherein the probe coexists with the agonist candidate substance in cells by introducing a polynucleotide expressing the probe into the cells.

9. (Withdrawn) The method for screening an agonist according to claim 7, wherein the probe coexists with the agonist candidate substance in all cells of a non-human animal or its progeny by introducing a polynucleotide expressing the probe into a non-human animal totipotent cell and developing the cell into a individual animal.

10. (Previously Presented) A method for screening an antagonist to nuclear receptor, which comprises making a probe of claim 1 coexist with an excessive amount of antagonist candidate substance and a known agonist, and measuring changes in a signal with and without the antagonist candidate substance.

11. (Original) The method for screening an antagonist according to claim 10, wherein the probe coexists with the agonist and the antagonist candidate substance in cells by introducing a polynucleotide expressing the probe into the cells.

12. (Withdrawn) The method for detecting an antagonist according to claim 10, wherein the probe coexists with the agonist and the antagonist candidate substance in all cells of a non-human animal or its progeny by introducing a polynucleotide expressing the probe into a non-human animal totipotent cell and developing the cell into an individual animal.

13. (Withdrawn) A non-human animal or its progeny, which is established by introducing a polynucleotide expressing a probe of claim 1 into non-human animal totipotent cell and developing the cell into an individual animal.